

WHAT IS CLAIMED IS:

25. A method for detecting and tracking a plurality of objects passing through or located in a predetermined portal area, comprising:
detecting presence of the objects at a first position within the portal area;
detecting presence of the objects at a second position within the portal area;
identifying the objects by interrogating with tags attached to or carried by the objects; and
determining direction of movement of the objects according to detection sequence between the first and second positions.
26. The method of Claim 25, further comprising a step of determining whether the objects are human beings or not by sensing temperature of the objects.
27. A system for identifying and tracking an object passing through or located at a portal area, comprising:
a tag carried by or attached to the object, the tag being encoded with unique identification information;
a portal panel unit located at the portal area;
a first set of detectors mounted on the portal panel unit to detect the object; and
a second set of detectors mounted on the portal panel unit to detect the object, the second set of detectors being spaced from the first set of detectors by a predetermined distance.
28. The system of Claim 27, wherein the tag includes a radio-frequency identification (RFID) tag or a barcode tag.
29. The system of Claim 27, wherein each of the first and second sets of detectors includes a plurality of vertically arranged detectors operative to detect presence of the objects.
30. The system of Claim 29, wherein each of the vertically arranged detectors includes a diffused-reflection sensor.
31. The system of Claim 29, wherein each of the vertically arranged detectors includes an IR sensor and a reflector aligned with each other across the portal area.
32. The system of Claim 29, wherein each of the vertically arranged detectors includes an optical emitter and an optical collector aligned with each other across the portal area.

33. The system of Claim 27, wherein each of the first and second sets of detector further comprises a human body heat sensor to detect whether the object is a human being or not.
34. The system of Claim 27, further comprising a comparator operative to compare detection sequence of the first and second set of detectors, so as to determine movement direction of the object.
35. The system of Claim 34, further comprising a reader operative to receive detection information generated by the first and second sets of detectors and the RF antenna and to transmit the detection information to the comparator.
36. The system of Claim 27, further comprising a programmable warning device to generate a signal when:
- a) no tag information of the object being detected is available;
 - b) no object information of the identified tag is available;
 - c) no movement of the object is detected;
 - d) only human movement is detected; or
 - d) any combination of the conditions of (a) to (d).
37. The system of Claim 27, further comprising a built-in motion detector or a built-in pressure sensing temper switch.
38. A portal scanner, comprising:
- a first set of detectors operative to detect presence of an object at a first position within a portal area; and
 - an RF antenna operative to interrogate a tag encoded with an identification code located within the portal area, wherein the tag is carried by or attached to the object.
39. The portal scanner of Claim 38, the first set of detectors includes a plurality of vertically arranged detectors.
40. The portal scanner of Claim 39, wherein each of the vertically arranged detectors includes a diffused-reflection IR sensor, a pair of IR sensor and reflector aligned with other across the first position, or a pair of an optical emitter and collector aligned with other across the first position.
41. The portal scanner of Claim 38, further comprising a built-in motion sensor or a pressure sensing tamper switch for detecting movement of the portal scanner.

42. The portal scanner of Claim 38, further comprising a comparator operative to count numbers of objects and tags being detected.
43. The system of Claim 38, further comprising a second set of detectors spaced from the first set of detectors by a predetermined distance.
44. The system of Claim 43, wherein the predetermined distance is about 2 feet.
45. The system of Claim 43, further comprising a comparator operative to determine direction of movement of the object according to detection sequence of the object by the first and second sets of detectors.
46. The system of Claim 43, wherein each of the first and second set of detectors includes an IR body heat sensor operative to detect whether the object is a human being or not.
47. The system of Claim 43, wherein the first and second detectors each includes a plurality of vertically arranged IR detectors.
48. The portal scanner of Claim 47, wherein each of the vertically arranged detectors includes a diffused-reflection IR sensor, a pair of IR sensor and reflector aligned with other across the second position, or a pair of an optical emitter and collector aligned with other across the second position.
49. The portal scanner of Claim 38, further comprising a metal detector circuitry for detecting present of metal within the portal area.
50. The portal scanner of Claim 38, further comprising an explosive detection circuitry for detecting presence of explosive material present within the portal area.